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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|-------------------------|------------------|
| 09/827,053 | 04/05/2001 | Andrew McKaig | BKA-22402/01 | 3450 |
| 7590 | 10/27/2003 | | EXAMINER | |
| Ernest I. Gifford Gifford, Krass, Groh, Sprinkle Anderson & Citkowski, P.C. 280 N. Old Woodward Avenue, Suite 400 Birmingham, MI 48009-5394 | | | MICHALSKY, GERALD A | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3753 | 14 |
| | | | DATE MAILED: 10/27/2003 | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/827,053 | MCKAIG, ANDREW |
| | Examiner | Art Unit |
| | Gerald A. Michalsky | 3753 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 17 October 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 10-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 10-22 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 17 October 2003 has been entered.
2. The "declaration" filed October 17, 2003 has been entered. In paragraph 1 of the declaration, it is stated that the declaration is made "under penalty of perjury". However, this is not a judicial proceeding. To constitute "perjury", an oath must be administered. No declaration has been made citing Section 1001 of Title 18 of the United States Code. Paragraph 2 of the declaration states "A copy of my curriculum vita is attached hereto as Exhibit A." The declaration is exhibit A and no curriculum vita is attached.
3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. Claims 10-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The recitation of "the movement of the piston

is in positional balance" in claim 10, line 14 and claim 16, lines 20-21 is regarded as "new matter". The recitation of "the distance between the seat end and the vent seat being proportional to a rate of change of the first pressure such that fluid is controllably discharged from the mold cavity" in the last three lines of claims 13 and 20 is regarded as "new matter". These recitations are not supported in the original disclosure. It is asserted in the "declaration" filed October 17, 2003 that one of ordinary skill in the art "would understand" certain conclusions. However, the original disclosure provides no support for any sort of intermediate positions or "bi-directional leakage".

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 16-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is no antecedent basis for "the check valve" recited in line 16 of claims 16 and 20.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 10, 13, 16-17, and 20-21 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Reilly. While the valve of Reilly may be slightly more over-balanced to the closed position than the valve of the applicant, because of the geometry of the pressure surfaces involved, the differences may be less than first apparent. For example, the annular area adjacent the end of the lead line for numeral 54 of Reilly is the area over which downstream pressure exerts force to open the valve. This annular area at 54 of Reilly is equal to the area of the valve piston minus the area of the valve seat. The "dome" pressure area is equal to the area of the valve piston. Therefore, the difference between the "dome" pressure area and the annular area at 54 of Reilly is equal to the area of the valve seat. However, the area of the valve seat, while appearing large in the drawing relative to the annular area at 54 of Reilly, is not really as large as it first appears. Because the annular area at 54 of Reilly completely surrounds the valve seat, the annular cross-sectional area increases proportionally with the square of the radius. Since area varies according to the square of the radius, the annular area at 54 is not as small as it first appears relative to the area of the valve seat and the dome pressure area. Similarly, in Figure 1 herein, the difference between the area of the piston and area of the inner diameter of the valve seat is not as small as is first apparent. In Reilly, the annular area at 54 is read as the "seat area". Therefore, the "dome-to-seat area ratio" is read as "nearly" 1:1 in Reilly. The "conventional control valve" described in column 5, lines 10-11 of Reilly is read as a "gas controller".

In the event that the "dome-to-seat area ratio" in Reilly cannot be read as "nearly" 1:1, then it would have been obvious to a person of ordinary skill in the art to provide a more "nearly" equal areas at the dome area and the annular area at 54 of Reilly in order to provide for venting at the earliest possible point when pressure at the inlet of Reilly is decreased. One of ordinary skill in the art would have recognized that the more nearly equal that the areas are at the dome area and the annular area at 54 of Reilly, the faster venting would occur when pressure is decreased at the dome area.

10. Claims 11-12, 14-15, 18-19, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reilly in view of Quartana et al. These claims are considered met as above except that there is no spring bias for the check valve 40 of Reilly. The check valve 40 of Reilly utilizes the resilience of O-ring 47 as a resilient bias for biasing the check valve closed. It would have been obvious in view of Quartana et al to substitute a check valve having a spring bias for the check valve 40 of Reilly having a resilient bias because of the equivalency of the one-way or non-return function.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gerald A. Michalsky whose telephone number is (703) 308-1049. The examiner can normally be reached on M-F 5:30 AM - 2 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel, can be reached on (703) 308-1272. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.



Gerald A. Michalsky
Primary Examiner
Art Unit 3753

GM
October 27, 2003